

**What is claimed is:**

1           1. A mobile communications system comprising at least one primary network  
2 unit capable of supporting a plurality of secondary network units each capable of  
3 supporting a plurality of mobile users, the primary and secondary network units  
4 communicating across a circuit switched interface, said system comprising means to  
5 provide an Internet Protocol tunnel between a primary network unit and a secondary  
6 network unit which it supports.

1           2. A system according to Claim 1 wherein the primary network unit is a Base  
2 Station Controller and the secondary network unit is a Base Transceiver Station .

1           3. A system according to Claim 1 wherein the primary network unit is a Radio  
2 Network Controller and the secondary network unit is a Node B.

1           4. A system according to Claim 2 wherein the Internet Protocol tunnel is arranged  
2 between a Channel Codec Unit in a Base Transceiver Station and a Packet Control Unit  
3 in a Base Station Controller, the Channel Codec Unit and the Packet Control Unit each  
4 comprising a Data link Layer/Physical Layer an Internet Protocol layer and a GPRS layer  
5 3/layer 2 message layer.

1           5. A system according to Claim 1 wherein each end of the Internet Protocol  
2 tunnel is associated with a Packet Classifier and Marker in respectively each primary  
3 network unit and each secondary network unit .

1           6. A system according to Claim 1 wherein the circuit switched interface is an  
2 Abis interface.

1           7. A system according to Claim 6 wherein each packet passing between a primary  
2 and a secondary network unit is arranged to contain adjacent the packet header an Abis-  
3 message type field which identifies the type of messages.

1           8. A system according to Claim 7 wherein the Abis-type message field identifies  
2 the secondary network elements in the BTS .

9. A system according to Claim 7 wherein the messages and the payload are multiplexed GPRS layer 3/layer 2 messages and the Abis-Message Type Field (64) is used to de-multiplex the messages on arrival of a packet at its destination.

1           10. A system according to Claim 1 wherein the circuit switched interface is an  
2 interface between a RNC and a Node B in a third generation mobile telecommunications  
3 network.